This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

HJ
65
.B16
1962/65
no.84
B 1,105,840

ESTIMATES COMMITTEE

1966—67

EIGHTY-FOURTH REPORT

(THIRD LOK SABHA)

INDIA
LOK SABHA SECRETARIAT

PROPERTY OF
University of Michigan Libraries
1817
ARTES SCIENTIA VERITAS

E. C. No. 445

ESTIMATES COMMITTEE
(1966-67)

EIGHTY-FOURTH REPORT

(THIRD LOK SABHA)

MINISTRY OF RAILWAYS

Action taken by Government on the recommendations contained in the Forty-Fourth Report of the Estimates Committee (Third Lok Sabha) on the Ministry of Railways—Chittaranjan Locomotive Works.

LOK SABHA SECRETARIAT
NEW DELHI
November, 1966/Kartika, 1888 (Saka)
Price : Rs. 0·50

HJ
65
.B16
1962/67
no. 84

LIST OF AUTHORISED AGENTS FOR THE SALE OF LOK SABHA SECRETARIAT PUBLICATIONS

Sl. No.	Name of Agent	Agency No.
	ANDHRA PRADESH	
1.	Andhra University General Cooperative Stores Ltd., Waltair (Visakhapatnam).	8
2.	G. R. Lakshmipathy Chetty and Sons, General Merchants and News Agents, Newpet, Chandragiri, Chittoor District.	94
	ASSAM	
.	Western Book Depot, Pan Bazar, Gauhati.	7
	BIHAR	
4.	Amar Kitab Ghar, Post Box 78, Diagonal Road, Jamshedpur.	37
	GUJARAT	
5.	Vijay Stores, Station Road, Anand.	35
6.	The New Order Book Company, Ellis Bridge, Ahmedabad-6.	63
	MADHYA PRADESH	
7.	Modern Book House, Shiv Vilas Palace, Indore City.	13
	MAHARASHTRA	
8.	M/s Sunderdas Gianchand, 601, Girgaum Road, Near Princess Street, Bombay-2.	6
9.	The International Book House (Private) Limited, 9, Ash Lane, Mahatma Gandhi Road, Bombay-1.	22
10.	The International Book Service, Deccan Gymkhana, Poona-4.	26
11.	Charles Lambert & Company, 101, Mahatma Gandhi Road, Opposite Clock Tower, Fort, Bombay.	30
12.	The Current Book House, Maruti Lane, Raghunath Dadaji Street, Bombay-1.	60
13.	Deccan Book Stall, Ferguson College Road, Poona-4.	65
	RAJASTHAN	
14.	Information Centre, Government of Rajasthan, Tripolia, Jaipur City.	38
	UTTAR PRADESH	
15.	Swastik Industrial Works, 59, Holi Street, Meerut City.	2
16.	Law Book Company, Sardar Patel Marg, Allahabad-1.	48
	WEST BENGAL	
17.	Granthaloka, 5/1, Ambica Mookherjee Road, Belgharia, 24 Parganas.	10
18.	W. Newman & Company Ltd., 3, Old Court House Street, Calcutta.	14
19.	Firma K.L. Mukhopadhyay, 6/1A, Banchharam Akrur Lane, Calcutta-12.	82
	DELHI	
20.	Jain Book Agency, Connaught Place, New Delhi.	1
21.	Sat Narain & Sons, 3141, Mohd. Ali Bazar, Mori Gate, Delhi.	3
22.	Atma Ram & Sons, Kashmere Gate, Delhi-6.	9
23.	J. M. Jaina & Brothers, Mori Gate, Delhi.	11
24.	The Central News Agency, 23/90, Connaught Place, New Delhi.	15
25.	The English Book Store, 7-L, Connaught Circus, New Delhi.	20
26.	Lakshmi Book Store, 42, Municipal Market, Janpath, New Delhi.	23

PL 490-SA

CONTENTS

	PAGE
COMPOSITION OF THE COMMITTEE	(iii)
INTRODUCTION	(v)
	1
	2
	25
	30
	32

C O R R I G E N D A

to

Eighty-Fourth Report (Third Lok Sabha) of the Estimates Committee on action taken by Government on the recommendations contained in the Forty-Fourth Report of the Estimates Committee (Third Lok Sabha) on the Ministry of Railways - Chittaranjan Locomotive Works.

Contents page line 7, for 'replies', read 'reply'.

page 4, footnote, for '4th Report' read '44th Report'.

LIST OF AUTHORISED AGENTS FOR THE SALE OF LOK SABHA SECRETARIAT PUBLICATIONS

Sl. No.	Name of Agent	Agency No.
	ANDHRA PRADESH	
1.	Andhra University General Cooperative Stores Ltd., Waltair (Visakhapatnam).	8
2.	G. R. Laks[illegible] and Sons, [illegible]chants an[illegible] Newpet, Chittoor [illegible]	
	A[illegible]	
[illegible]	Western [illegible] Bazar, Ga[illegible]	
	B[illegible]	
4.	Amar Kit[illegible] Box 78, [illegible] Jamshedpu[illegible]	
	GU[illegible]	
5.	Vijay Store[illegible] Anand.	
6.	The New [illegible] Company, Ahmedaba[illegible]	
	MADHY[illegible]	
7.	Modern Bo[illegible] Vilas Pala[illegible]	
	MAHAR[illegible]	
8.	M/s Su[illegible] 601, [illegible] Prin[illegible]	
9.	The [illegible] H[illegible]	
13.	Deccan Book Stall, Ferguson College Road, Poona-4.	65
23.	J. M. [illegible], Mori Gate, Delhi.	15
24.	The Central News Agency, 23/90, Connaught Place, New Delhi.	20
25.	The English Book Store, 7-L, Connaught Circus, New Delhi.	23
26.	Lakshmi Book Store, 42, Municipal Market, Janpath, New Delhi.	

PL 480-SA

CONTENTS

	PAGE
COMPOSITION OF THE COMMITTEE	(iii)
INTRODUCTION	(v)
CHAPTER I. Report	1
CHAPTER II. Recommendations which have been accepted by Government.	2
CHAPTER III. Recommendations which the Committee do not want to pursue in view of Government's reply.	25
CHAPTER IV. Recommendation in respect of which replies of Government has not been accepted by the Committee.	30
APPENDIX	
Analysis of the action taken by Government on the recommendations contained in the 44th Report of the Estimates Committee (Third Lok Sabha).	32

ESTIMATES COMMITTEE
(1966-67)

CHAIRMAN

Shri Arun Chandra Guha

MEMBERS

2. Shri A. Shanker Alva
3. Shri Onkarlal Berwa
4. Shri Dinen Bhattacharya
5. Shri Parashottamdas Haribhai Bheel
6. Sardar Daljit Singh
7. Dr. Mono Mohan Das
8. Shri Digambar Singh Chaudhri
9. Shri Kashi Ram Gupta
10. Shri J. N. Hazarika
11. Shrimati Jamuna Devi
12. Shri Narayan Sadoba Kajrolkar
13. Shri C. M. Kedaria
14. Shri Baij Nath Kureel
15. Shrimati Sangam Luxmi Bai
16. Shri Rama Chandra Mallick
17. Shri Dwarka Dass Mantri
18. Shri Dhuleshwar Meena
19. Shri Mohan Swarup
20. Shri T. D. Ramabadran
21. Shri J. Ramapathi Rao
22. Shri Rameshwar Sahu
23. Dr. Ranen Sen
24. Shri M. Shankaraiya
25. Shri Nardeo Snatak
26. Shri N. M. R. Subbaraman
27. Shri Shiva Datt Upadhyaya

28. Shri Virbhadra Singh
29. Shri Vishram Prasad
30. Shri Bhishma Prasad Yadava.

SECRETARIAT

Shri B. B. Tewari—*Deputy Secretary.*

Shri B. K. Mukherjee—*Under Secretary.*

INTRODUCTION

I, the Chairman of the Estimates Committee, having been authorised by the Committee, present this Eighty-Fourth Report of the Estimates Committee on action taken by Government on the recommendations contained in the Forty-Fourth Report of the Estimates Committee (Third Lok Sabha) on the Ministry of Railways—Chittaranjan Locomotive Works.

2. The Forty-Fourth Report of the Estimates Committee was presented to the Lok Sabha on the 20th February, 1964. Government furnished replies indicating action taken on the recommendations on the 18th July, 1964 and 31st August, 1964. Government's replies to all the recommendations were considered by the Study Group 'D' of the Estimates Committee on the 1st October, 1964 who desired that further information in respect of two recommendations might be called for. Further replies in respect of the two recommendations were received on the 21st December, 1964 and were considered by the Study Group 'D' on the 26th April, 1965. The draft Report on action taken by Government on the recommendations contained in the Forty-Fourth Report was considered by Study Group 'E' on the 17th February, 1966 and adopted by the Committee on the 12th October, 1966.

3. The Report has been divided into the following Chapters:—

(I) Report.

(II) Recommendations which have been accepted by Government.

(III) Recommendations which the Committee do not want to pursue in view of the Government's reply.

(IV) Recommendation in respect of which reply of Government has not been accepted by the Committee.

4. An Analysis of the action taken by Government on the recommendations contained in the Forty-Fourth Report of the Estimates

Committee (Third Lok Sabha) is given in the Appendix. It would be observed therefrom that out of 33 recommendations made in the Report, 30 recommendations *i.e.*, 91 per cent have been accepted by Government and the Committee do not desire to pursue two recommendations *i.e.*, 6 per cent in view of the Government's reply. Reply of Government in respect of one recommendation *i.e.* 3 per cent has not been accepted by the Committee.

NEW DELHI;
9th November, 1966.
18*th Kartika*, 1888 (*Saka*).

ARUN CHANDRA GUHA,
Chairman,
Estimates Committee.

CHAPTER I

REPORT

The Estimates Committee are glad to state that the points brought out in their Forty-Fourth Report (Third Lok Sabha) on the Ministry of Railways—Chittaranjan Locomotive Works have been replied to by the Government in time and generally to their satisfaction.

CHAPTER II

RECOMMENDATIONS WHICH HAVE BEEN ACCEPTED BY GOVERNMENT

Recommendation (Serial No. 1) Paras Nos. 1—6

Requirement of B. G. steam locomotives for the Third Plan period has been assessed as 840. The output from Chittaranjan Locomotive Works indicates that the target would be fully achieved. The Committee are glad that the out-turn of Chittaranjan Locomotive Works is in accord with its capacity and the Plan target.

REPLY OF GOVERNMENT

The observations of the Committee are noted.

[*Ministry of Railways (Railway Board) O.M. No. 64-B(c)-E.C./44, dated 18th July, 1964*].

Recommendations (Serial Nos. 2, 3 & 4) Paras Nos. 7, 8 & 9

2. *The Committee find that while the Chittaranjan Locomotive Works have been able to execute the orders for the manufacture of W. G. locomotives, there has been a time-lag of several years between the placement of order and the commencement of production in the case of W.P., W.T. and W.L. locomotives.*

3. *The first order for the manufacture of W.P. locomotives was placed on the Chittaranjan Locomotive Works on the 16th May, 1959. Production was started towards the middle of 1962 and the first W.P. locomotive ran a successful trial in February, 1963. The Committee consider that the time-lag of nearly three years in the commencement of supply of W.P. locomotives after the placement of order was unduly long. As the Chittaranjan Locomotive Works have now gathered sufficient experience and expert knowledge of manufacture of steam locomotives every effort should be made to reduce the time-lag between the receipt of order for manufacture of new locomotive and its execution and delivery.*

4. *The target for production of W.P. locomotives from April, 1963 to August, 1963 was 27, against which only 22 W.P. locomotives have been turned out. It is hoped that over the Plan period it would be*

possible to manufacture the requisite number of W.P. locomotives. In the meantime, production will be maintained by manufacturing additional WGs and the adjustment will be made later on by manufacturing less WGs and more WPs in order to complete the requisite number of each type. As WP and WG locomotives have distinct uses, and are not precisely inter-changeable, the Committee would stress that every effort should be made to produce the requisite number of locomotives of each type during each year as originally scheduled.

REPLY OF GOVERNMENT

The recommendations of the Committee have been noted.

The increase in the rate of production of WP locos at CLW is linked up with the availability of Bogie Steel castings from their own foundry as well as from other indigenous suppliers. Keeping in view the likely availability of these castings they have already planned for increase in the rate of production of WP locos.

Production of WT and WL locos was deferred with a view to avoid diversified production at one and the same time. According to the tentative manufacturing schedule of the Chittaranjan Locomotive Works the production of WT and WL locos will be taken up as a sideline one after the other on completion of the orders for WG/WP locos already placed.

[*Ministry of Railways (Railway Board) O.M. No. 64-B(c)-E.C./44, dated 18th July, 1964*].

Recommendation (Serial No. 5) Para No. 10

The Committee are somewhat at a loss to understand how the Railways propose to relegate the older locomotives to meet "shunting and branch line traffic requirements" when admittedly an economic comparison cannot be made between WG and WT locomotives. They would suggest that the position may be carefully reviewed by the Ministry of Railways having due regard to the need for employing an economic locomotive for suburban branch line and shunting operations.

REPLY OF GOVERNMENT

Much of the suburban traffic of the Calcutta and Madras areas is planned to be hauled by EMUs during the Third/Fourth Plan. The requirements of the suburban traffic of Bombay are already being met with Electrical Multiple Units and that of Delhi with diesel shunting locomotives.

The requirement of steam locomotives for suburban operations will, therefore, to a large extent be met by the release of existing steam locomotives suitable for such operations, mainly from the Calcutta area, as well as the 20 WT locomotives at present on order with the Chittaranjan Locomotive Works.

The older types of steam locomotives released as a result of the present large scale dieselisation/electrification programme, though unsuitable for use on fast passenger/goods trains, will be suitable for branch line and shunting operations to which they are proposed to be relegated.

30 Diesel shunters against the Third Plan requirement are also under order for shunting operations.

[*Ministry of Railways (Railway Board) O.M. No. 64-B(c)-E.C./44, dated 18th July, 1964*].

FURTHER INFORMATION CALLED FOR BY THE COMMITTEE

In view of the earlier statement made by the Ministry before the Committee that "WG locomotive, although designed as a main line unit, can be used in shunting service but the fuel consumption would be very high since the load factor on a shunting locomotive is of a low order and the standby losses on a larger grate area would affect fuel economy", the Ministry may please clarify whether "the older types of steam locomotives released as a result of the present large scale dieselisation/electrification programme, though unsuitable for use on fast passenger/goods trains", will be suitable for branch line and standby operations to which they are proposed to be relegated. If so, the Ministry may also state if the position having regard to the need for employing an economic locomotive for suburban, branch line and shunting operations, has since been reviewed.*

[Lok Sabha Secretariat O.M. No. 5/19(2)EC/63, dated 26th October, 1964.]

REPLY OF GOVERNMENT

Older types of steam locomotives that are likely to be released as a result of the dieselisation and electrification programmes as also due to replacement on age basis, though not suitable for use on fast passenger and goods services on the main line, can be employed economically for the lighter services on branch lines and for shunting services. Keeping in view the release of such locomotives, the plans for the future manufacture of steam locomotives have been reviewed from time to time to suit the requirements of main line, suburban,

*4th Report of the Estimates Committee, para. 10, page 7.

branch line and shunting services. As a result of these reviews the following types of locos have been ordered for manufacture at C.L.W. during the last two years of the 3rd Plan and the first year of the 4th Plan for use on main lines as well as branch lines for light fast passenger services.

Type	No. Ordered	Date of placing order
WT	20	14-4-60/16-10-62
WL	24	29-11-62
WL	70	24-10-64

For shunting operation in busy yards, it has been decided as a matter of policy to procure diesel shunters.

[*Ministry of Railways (Railway Board) O.M. No. 64-B(c)-E.C./44, dated 21st December, 1964*].

Recommendation (Serial No. 6) Para No. 11

The Committee are glad to note that the Chittaranjan manufactured locomotives compare not only in performance but also in price favourably with the locomotives which used to be imported from abroad. The Railways can justifiably be proud of having brought down the cost of manufacture from Rs. 7.94 lakhs in 1952-53, to Rs. 4.31 lakhs in 1962-63. The Committee have no doubt that strenuous efforts would continue to be made to keep down the cost of manufacture of new locomotives W.P., W.T., etc. which have lately been taken up for manufacture.

REPLY OF GOVERNMENT

The observation of the Committee is noted. The Committee are assured that every effort will be made to keep down the costs of manufacture of new types of locomotives, WP, WT etc. as low as possible.

[*Ministry of Railways (Railway Board) O.M. No. 64-B(c)-E.C./44, dated 18th July, 1964*].

Recommendation (Serial No. 7) Para No. 12

The Committee are glad to find that the Chittaranjan Locomotive Works are fully alive to the need for continuously improving the design and manufacturing processes with a view to effecting not only reduction in cost but also improving efficiency.

REPLY OF GOVERNMENT

The observations of the Committee are noted.

[*Ministry of Railways (Railway Board) O.M. No. 64-B(c)-E.C./44, dated 18th July, 1964*].

Recommendation (Serial No. 8) Para No. 13

Cost of asbestos required for the complete insulation of a steam locomotive is about Rs. 5,500 out of which Rs. 800 represent the component of foreign exchange required for imports. It is estimated that the overall saving resulting from complete boiler insulation will be about Rs. 2,000 to Rs. 2,500 per locomotive per year. The difficulty in going ahead with the measure is not its cost which is low but the release of foreign exchange or its import content. The Committee suggest that limited quantities of insulation materials may be imported and the necessary field trials carried out, so that the efficacy and economics of the insulation are established. They have no doubt that if field trials demonstrably prove that a substantial economy would be effected in fuel consumption, the Government would either allow imports of the requisite insulation material, involving a nominal cost of Rs. 800 per locomotive, or ensure its indigenous manufacture.

REPLY OF GOVERNMENT

The Research Designs and Standards Organisation of the Railways have finalised the design for the complete insulation of steam locomotive boilers and a specification has also been drawn up for the asbestos material based on maximum use of indigenous material and involving minimum foreign exchange. The Railways will procure asbestos mattresses according to this design and specification and will carry out necessary trials to establish the efficacy and economics of the insulation. Fibre glass which is an alternative material of equally good insulating properties, has also been recently tried on one locomotive boiler on the Southern Railway. This material for the present, has to be imported from abroad. It is understood that an Indian firm would be setting up a factory in the country for manufacture of this product, the output of which will be sufficient to cover the complete requirements of the Railways, thereby eliminating altogether the need for any foreign exchange.

[*Ministry of Railways (Railway Board) O.M. No. 64-B(c)-E.C./44, dated 18th July, 1964*].

Recommendation (Serial No. 9) Para No. 13

As the Railway continue to have a large number of steam locomotives and have also expert knowledge and experience of their manufacture, the Committee would stress that measures for effecting fuel economy should be intensified further. In this context, they would suggest that the active help of the Central Fuel Research Institute, Dhanbad, may also be taken.

REPLY OF GOVERNMENT

Fuel Control Organisations, in adequate strength, which have been set up on all the Railways are mainly responsible for introducing measures to economise the consumption of fuel on the Railways. These organisations are concentrating on controlling wastage and training of staff etc. and keep a careful watch on operating conditions which tend to increase the consumption of coal.

Apart from the Fuel Control Organisation, the Research Design & Standards Organisation is engaged in evolving certain improvements in the design of the steam locomotive with the object of effecting fuel economy; in this connection, intensive investigations are being made on the following lines:—

(i) *Giesl Oblong Ejectors*—

This is a new type of blast arrangement offering fuel economy by improved draught reduced cylinder back pressure. The manufacture of this equipment for 12 W.G. & 12 W.P. boilers is in hand in the Chittaranjan Locomotive Works and so far 6 sets have been supplied to the Southern, South-Eastern and the Western Railways. The remaining sets are expected to be supplied shortly. The Eastern Railway, in the meanwhile, have fitted 25 W.G. locomotives with locally made ejectors. Service trials are in progress and it is also proposed to carry out trials with the aid of the dynamometer car very shortly.

(ii) *Insulation of boilers*—

Complete insulation of the locomotive boiler results in fuel economy. The R.D.S.O. have finalised a design and have also drawn up a specification for asbestos mattresses for insulating loco boilers. The Railways will procure this material and will carry out necessary trials to determine the efficacy and economics of the insulation. An alternative material in the form of fibre glass has also been locat-

ed and one locomotive boiler on the Southern Railway has recently been insulated with this material for trial purposes.

(iii) *Over-fire air arrangement—*

This arrangement improves combustion of coal and thus reduces its consumption. The design for the required arrangement has been finalised and a suitable type of fire brick has also been evolved. One W.G. locomotive has already been turned out with over-fire air arrangement and is now under observation on the Central Railway. Five more W.G. locos will be fitted by C.L.W. and six Y.P. locos by TELCO after which the trials will be commenced during the next few months to assess the saving in fuel consumption.

(iv) *Feed water heaters—*

Arrangements have been finalised in regard to installation of feed water heater equipment on 12 W.G. locos to be built at Chittaranjan. The design drawings of the equipment have been received and C.L.W. is being advised to undertake manufacture of the equipment to enable the same to be tried out in service. It is anticipated that considerable savings would accure by the provision of this fuel economy device.

The Committee's suggestion that the active help of the Central Fuel Research Institute, Dhanbad, may be taken by the Railways, is noted. Actually, there have already been some contacts with the Institute in respect of fuel economy measures on the Railways and these will be intensified.

[*Ministry of Railways (Railway Board) O.M. No.* 64-*B*(*C*)-*E.C.*/44, *dated* 18*th July,* 1964].

Recommendation (Serial No. 10) Para No. 14

The Committee are informed that the actual condemnation and withdrawal of a locomotive is done on condition-cum-obsolescence basis. The Committee would stress that every locomotive which is due for superannuation be fully examined also from the point of view of safety, maintenance costs and operating expenses and should be retained in service, if its use is not uneconomical.

REPLY OF GOVERNMENT

Locomotives that reach the age of superannuation are examined thoroughly for their condition taking into account all relevant factors including safety, operating efficiency and maintenance costs etc. etc. and are retained in service only when they can be maintained satisfactorily from these points of view particularly that of safety.

Instructions have also been issued to the Railways to ensure adequate inspection and maintenance of such locomotives and that locomotives which are not economical to maintain and inefficient in utilization, may be considered for withdrawal/condemnation on age-*cum*-condition basis.

[*Ministry of Railways (Railway Board) O.M. No. 64-B (C)-E.C./44, dated 18th July,* 1964].

Recommendation (Serial No. 11) Para No. 17

The Committee find that the demand for Broad Gauge A.C. locomotives for the Third Five Year Plan has been assessed as 244 out of which only 107 are at present programmed to be manufactured in Chittaranjan Locomotive Works, the balance (137) to be imported from abroad.

The Committee would stress that every effort should be made to increase the output of A.C. locomotives in Chittaranjan Locomotive Works to meet the demand to the maximum extent possible. The Committee would, in fact, suggest that as steam locomotives are on the way out all over the world, it would but be appropriate that from now onwards a long-term and well-planned scheme for the conversion of Chittaranjan Locomotive Works to the manufacture of electric locomotives (both Broad Gauge and Metre Gauge) is drawn up and implemented to make India self-sufficient in electric traction.

REPLY OF GOVERNMENT

In C.L.W. facilities for the manufacture of A.C. electric locomotives are being provided at a cost of Rs. 2.26 crores. The production target of 6 locos per month is expected to be reached in July, 1965. In the Fourth Five Year Plan it is proposed to reduce progressively the production of steam locomotives and increase the production of electric locomotives. According to the present estimation the C.L.W. is likely to cease production of steam locomotives by the end of 1969-70 or so. All the electric locomotives required during the Fourth Five Year Plan are likely to be produced in C.L.W.

[*Ministry of Railways (Railway Board) O.M. No. 64-B (C)-E.C./44, dated 18th July,* 1964].

Recommendation (Serial No. 12) Para No. 17

The cost of A.C. electric locomotive is stated to be about the same as of imported locomotive. One of the senior officers who was deputed to assist the North British Locomotive Co., United Kingdom in preparing the Project Report for undertaking manufacture of A.C. locomotives in Chittaranjan has estimated that "the total approximate cost of manufacturing an electric loco will work out to Rs. 10 lakhs, a figure very much below the cost of an imported locomotive." The Committee have no doubt that as in the case of steam locomotive, no effort would be spared to bring down the cost of manufacture of electric locomotives in Chittaranjan below the cost of an imported electric locomotive.

REPLY OF GOVERNMENT

The observation of the Committee is noted. The Committee are assured that no effort will be spared to keep the costs of electric locomotives manufactured in Chittaranjan as low as possible.

[*Ministry of Railways (Railway Board) O.M. No. 64-B(C)-E.C./44. dated 18th July,* 1964].

Recommendation (Serial No. 13) Para No. 19

From the Agreement between the Government and M/s Group, it is noted that the latter have not granted right to the Government for the manufacture of certain electrical equipment. The Agreement, however, provides that the Group will ensure the indigenous manufacture of high-voltage tap-changers (one of the items for which right has not been granted to Government) to the maximum extent possible within three years of the signing of the Agreement. The Agreement also provides that in case the manufacture is not started in India either, by Brawn Boveri & Co. Ltd., or in collaboration with an Indian firm, the Group will render necessary technical assistance for their manufacture in a designated railway workshop. The Committee would stress that the Railways should keep a close watch over developments for the manufacture of high-voltage tap-changers in the country either in public or private sector.

They would also suggest that for the remaining items, the Railway Board should constitute a small expert body consisting of representatives of Railways, International Trade, Heavy Electricals and the industry to locate urgently the indigenous sources for the manufacture and supply of equipment.

REPLY OF GOVERNMENT

The Railway Electrification Project and the Chittaranjan Locomotive Works are already making efforts to develop indigenous capacity for the manufacture of equipment for A.C. B.G. Freight locos, both Group items and non-Group items. They have so far been successful in locating indigenous capacity for the following items:—

Item	Firm
Group items not covered by the agreement	
1. Tap-Changer	Hindustan Electrical Co., Bombay in collaboration with M/s. Brown Boveri.
2. Air-blast circuit breaker	
Group items covered by the agreement	
Arno convertors	M/s. Jyoti Ltd., Baroda.
Non group items	
1. Pantograph	M/s. J. Stone & Co.
2. Air Compressor (Westing House designed).	M/s. Kirloskar.
3. Exhausters	M/s. Gresham & Craven.
4. Measuring Instruments	M/s. S. L. M. Manek Lal

Indigenous manufactureres are being encouraged to take up manufacture of these items.

A Deputy Chief Electrical Engineer at Chittaranjan Locomotive Works has already been assigned exclusively for the task of exploring and developing indigenous capacity for the manufacture of electrical equipment for A. C. locomotives. The suggestion of the Committee to set up a small expert body for this purpose has been noted and will be considered if the need arises.

[*Ministry of Railways (Railway Board) O.M. No. 64-B(C)-E.C./44 dated 18th July,* 1964.]

Recommendation (Serial No. 14) Para No. 20

The Committee feel that it would have been more equitable if a provision regarding free exchange of information of improvements between the Group and the Government could have been provided on the same lines as done in the Agreement with the American Diesel Locomotive Company to cover the full 8 year period of the agreement without excluding the last two years. They would also

unit at C.L.W. and a schedule for manufacture will also be drawn up in due course.

[*Ministry of Railways (Railway Board) O.M. No. 64-B(C)-E.C./44, dated 18th July,* 1964].

Recommendation (Serial No. 19) Para No. 29

While the Committee are glad to note the efforts being made by the Railways to increase the indigenous contents in the installation of the steel foundry; they also note that the imported contents of the machinery would constitute about 29 per cent of the total outlay on plant and machinery. They would suggest that every effort should be made to further reduce the quantity and value of imported components and to locate indigenous sources of manufacture of equipment, in consultation with the Ordnance Factories, who have previous experience in installation of such foundries and the Department of Technical Development.

REPLY OF GOVERNMENT

Efforts have been made, from the very beginning of the Steel Foundry project, to procure as much of the machinery and plant from indigenous manufacturers as possible. Full use has been made of all information available with the existing steel foundries of repute in the country and with the Department of Technical Development about the availability of equipment from indigenous sources. Even in the case of imported equipment, the foreign manufacturers have been persuaded, wherever possible, to give manufacturing drawings for some of the items, which could be manufactured either in the fabrication shop set up at Chittaranjan for this project or by indigenous manufacturers. Some examples of this nature are given below:—

(a) *Sand preparation, distribution and return system*:

Negotiations were held with M/s. Acme Conveyors Ltd. of U.K., the suppliers of this equipment and they were persuaded to supply working drawings for about 50 per cent of the plant by payment of a small charge for the drawings. The manufacture and fabrication of some of these items were taken up in the fabrication shop at Chittaranjan and some supplies were arranged from indigenous firms. As a result of this, foreign exchange to the extent of £78,772 was saved.

(b) *Sand washing, grading and drying plant*:

Global tenders were invited for this plant. The lowest acceptable offer was from a British firm and involved foreign exchange of £33,805. There was also an offer from an indigenous firm for

emphasise that in future agreements it may be ensured that the exchange of information of improvements effected is done on reciprocal basis and on equitable terms.

REPLY OF GOVERNMENT

The Committee's observations are noted.

[*Ministry of Railways (Railway Board) O.M. No. 64-B(C)-E.C./44 dated 18th July,* 1964].

Recommendation (Serial No. 15) Para No. 21

The manufacture of electrical components listed in Schedule 'B' to the Agreement concluded by the Railways with M/s. Group is to be undertaken by the Heavy Electricals Ltd., Bhopal on behalf of the Government. The Committee would stress that the manufacture of A.C. frieght loco-motors and A.C. loco-transformers etc should be undertaken by the Heavy Electricals Ltd., Bhopal without delay so that the requirements for the manufacture of electric locomotives are met indigenously, as far as possible. The Committee would also suggest that to avoid uncertainty, a detailed schedule may be drawn up for the manufacture and supply of these components by Heavy Electricals to the Chittaranjan Locomotive Works.

REPLY OF GOVERNMENT

The programme of production of electrical equipment for A.C. freight type locomotives has been discussed with the Heavy Electricals' authorities from time to time and a tentative schedule of production commencing from 1965-66 has been drawn up.

2. In the meantime, with the decision to manufacture diesel electric locomotives at the Diesel Locomotive Works, Varanasi, the Railways' demand for traction motors has gone up considerably. There will also be a tapering down of steam locomotive production at Chittaranjan Locomotive Works during the Fourth Plan, which will release some workshop capacity (shop space, machine capacity and trained labour). Taking into consideration, therefore, the large requirement of electric traction equipment at the end of the Fourth Plan and also the expected release of workshop capacity at Chittaranjan, it has recently been decided, in consultation with the Ministry of Steel, Mines and Heavy Engineering, Ministry of Finance, Plannng Commission and H.E.I.L., to undertake manufacture of traction motors for AC locomotives at Chittaranjan Locomotive Works, and the manufacture of transformers at H.E.I.L., Bhopal. Action is now being taken to set up a traction motor manufacturing

supplying a major portion of the equipment from indigenous sources. After detailed discussions the order was placed on the indigenous firm with a foreign exchange element of only about £8,250, thus saving about £25,555 of foreign exchange.

(c) *Cleaning plant*:

Orders have so far been placed for four different types of cleaning plant on a U.K. firm which was prepared to have part of the equipment manufactured indigenously, which saved £30,000 in foreign exchange.

(d) *Powered roller conveyors*:

This equipment has not been made in India so far. The lowest imported offer was for £33,400. After detailed discussions with manufacturers of conveyor equipment in India, it has been possible to place the entire order on an indigenous firm, which has been asked to manufacture part of the equipment for trial before proceeding with bulk manufacture. This equipment was inspected recently and has been found to be satisfactory. This has saved foreign exchange of £33,400.

The foregoing examples indicate the efforts made to reduce foreign exchange expenditure on the plant and equipment for the Steel Foundry . By such efforts foreign exchange to the extent of £185,040 has been saved on 9 different items of equipment.

[*Ministry of Railways (Railway Board) O.M. No. 64-B(C)-E.C./44, dated 18th July,* 1964.]

Recommendation (Serial No. 20) Para No. 30

The Committee are glad to note that arrangements for ensuring supply of raw materials for the steel foundry have been made by Government and that no difficulty is apprehended in this behalf.

REPLY OF GOVERNMENT

All necessary arrangements have been made to ensure supply of raw materials for the steel foundry at the Chittaranjan Locomotive Works and this aspect will continue to be kept under constant watch.

[*Ministry of Railways (Railway Board) O.M. No. 64-B(C)-EC/45, dated 18th July,* 1964].

Recommendation (Serial No. 21) Para No. 31

The Committee have been informed that certain raw materials for the Steel Foundry will have to be imported for a period of two years. Value of imported raw materials will be about 7.96 percent of the

total value of raw materials to be used in the Steel Foundry. The Committee would stress that every effort should be made to procure these raw materials in the country within the next two years so that foreign exchange expended on their imports can be saved.

REPLY OF GOVERNMENT

Raw materials required to be imported for the present for the steel foundry being set up at Chittaranjan Locomotive Works are:—

(i) Graphite electrodes for electric arc furnace.

(ii) Iron powder for powder washing machine used for removal of excess metal in castings at locations which are not easily accessible by normal mechanical metal removing tools.

(iii) Fluorspar.

(iv) Copper quality graphite electrodes for arc air equipment for removal of metal from castings.

Indigenous production of item (i) is expected to start by the end of 1965. A wagon load of fluorspar (item iii) has been obtained by the Chittaranjan Locomotive Works from Hindustan Steel, Bhilai, and it is understood that this has been supplied from deposits located near the place. The supply has been satisfactory and it is hoped that regular supplies will be forthcoming from this source. For items (ii) and (iv), efforts to develop indigenous capacity are being continued in consultation with the Department of Technical Development.

[*Ministry of Railways (Railway Board) O.M. No. 64-B(C)-E.C./44, dated 18th July,* 1964].

Recommendation (Serial No. 22) Para No. 32

As tne steel foundry, being set up in Chittaranjan, is the first founary on the Railways the Committee would stress that every care should be taken to see that the requisite number of staff are got trained well in advance, so that later on, no difficulties are experienced in manning the project. They have no doubt, that the Railways would take full advantage of the provisions in the Agreement (with their collaborator) to provide training to their personnel particularly in the fields of designing and finishing and in the methods of estimating and costing.

REPLY OF GOVERNMENT

Adequate care has been taken to see that the requisite number of staff are trained in time for manning the steel foundry project in Chittaranjan. Advantage is also being taken, to the extent necessary, of the provisions in the agreement with the collaborator, to

provide training to Chittaranjan personnel at the works of the collaborator in U.K. Twenty-five officers and technical personnel have already been thus trained in three batches, the last batch having recently returned after completion of their training in U.K. 4 more technical personnel are expected to be sent to U.K. shortly for training.

[*Ministry of Railways (Railway Board) O.M. No. 64-B (C)-E.C./44, dated 18th July, 1964*].

FURTHER INFORMATION CALLED FOR BY THE COMMITTEE

Please communicate the number of personnel got trained in the fields of designing and finishing and in the methods of estimating and costing at the establishments of the collaborators.

[*Lok Sabha Sectt. O.M. No. 5/19(2)EC/63, dated 26th October, 1964*].

REPLY OF GOVERNMENT

The following number of personnel have been trained/are being trained in the fields indicated:—

(a) *Designing, Finishing, Estimating & Costing*	
No. already trained—	2
(b) *Designing, Finishing & Estimating* ..	
No. already trained—	2
(c) *Designing & Finishing*	
(i) No. already trained—	2
(ii) No. under training—	2
(d) *Designing*	
No. already trained—	2
(e) *Finishing*	
No. already trained—	4

[*Ministry of Railways (Railway Board) O.M. No. 64-B (C)-E.C./III/44, dated 21st December, 1964*].

Recommendation (Serial No. 23) Para No. 33

As the steel foundry, being installed at Chittaranjan Locomotive Works, is stated to be modern and fully mechanised, the Committee have no doubt that Government would keep a watch to ensure that

the cost of casting in the foundary compares favourably with the cost of casting in advanced countries.

REPLY OF GOVERNMENT

The observation of the Committee is noted and a watch will be kept to ensure that the cost of castings in the steel foundry at Chittaranjan compares favourably with the cost of castings in advanced countries.

[*Ministry of Railways (Railway Board) O.M. No. 64-B(C)-E.C./44, dated 18th July, 1964*].

Recommendation (Serial No. 24) Para No. 34

The Committee are informed that the percentage of indigenous purchases of stores made by Railways has risen from 82.5 per cent in 1959-60 to 91.81 per cent in 1961-62. The Committee are glad to know the welcome increase in the percentage of purchases made from indigenous sources by the largest national undertaking in the country. They hope that efforts will be continued to reduce the imported components still further.

REPLY OF GOVERNMENT

The Ministry of Railways are grateful for the Committee's appreciation of the efforts made by the Ministry to increase the percentage of purchases made by them from indigenous sources. These efforts are being vigorously continued, so that imports are reduced to a minimum.

[*Ministry of Railways (Railway Board) O.M. No. 64-B(C)-E.C./44, dated 18th July, 1964.*]

Recommendation (Serial No. 25) Paras Nos. 36-37

The Committee are informed that the design and make of roller-bearings supplied by National Engineering Industries for hind truck and tender axle boxes of locomotives was found to be unsatisfactory in service and therefore its application had perforce to be stopped. It is understood that Messrs. National Engineering Industries have been asked to get out a more robust and foolproof design of roller-bearing for the hind truck and tender axle box of locomotives.

The Committee also understand that the National Engineering Industries, Jaipur, in the early stages made front truck bearings for WGs but its design was found to be unsatisfactory in service and its

extended application had to be discontinued. Cost of bearings purchased from NEI is also higher than the price paid for the bearings imported from S.K.F. Ball Bearing Co. The Committee thus note that not only the performance of ball-bearing supplied by the Indian firm for the tender axle boxes of locomotives has been unsatisfactory but that their price is considerably higher than imported S.K.F. ball-bearings. The Committee would stress that every effort should be made to improve the indigenous quality of ball-bearings and reduce their price.

The Committee would also stress that concerted measures should be taken early to develop indigenous capacity for manufacture of roller-bearings required for rolling stock which is now largely built within the country. As roller-bearings play a pivotal role in machinery, the Committee cannot too strongly emphasise the need for maintaining the highest standard in its manufacture.

REPLY OF GOVERNMENT

As a result of discussions with Messrs. National Engineering Industries, Jaipur, who are at present the only manufacturers of roller-bearings for rolling stock, the firm have submitted revised designs for WP/WG hind truck and tender bearings. These are under scrutiny. It is expected that the firm will be able to start manufacture of these bearings in about 9 months after approval of the designs. The firm has also been asked to submit suitable designs of roller-bearings for WG front truck, WP front bogie, as also for WP and WG coupled axle boxes. This is being followed up, to eliminate as early as possible the necessity of importing these bearings.

2. The higher price of indigenous roller-bearings is on account of a variety of factors, like cost of raw material, volume of production, productivity achieved etc. While the cost of tender bearings and axle boxes has been somewhat higher, the cost of front truck and hind truck bearings and axle boxes obtained from the N.E.I. has been slightly lower than the imported cost. However, as the industry develops in India and cost of raw materials like steel etc. come down, it is hoped that the prices of indigenous roller bearings will become competitive.

3. In addition to the schemes submitted by National Engineering Industries for expanding their capacity to about 57,000 axle box sets per annum, the Andhra Pradesh Industrial Development Corporation has also been granted an industrial licence for the manufacture of 24,000 axle box-sets per annum of roller-bearings suitable for rolling stock. Further Messrs. Bharat Ball Bearing Co. have been given

a letter of intent by the Ministry of Steel, Mines and Heavy Engineering for establishing the manufacture of railway roller-bearings complete with axle boxes up to a capacity of 36,000 pieces per annum. It is a condition of the letter of intent that the type of bearings to be manufactured by the firm should have the prior approval of the Research, Designs and Standards Organisation of the Ministry of Railways, and that they would make more than one type of railway roller-bearings, for example, spherical and taper, in addition to the cylindrical. It is expected that with this further production coming up it will be possible to meet most of the demands for roller bearings for rolling stock indigenously by the end of the Third Plan period.

4. To advise the Government on the future lines of development of the ball bearing industry and suggest solutions to the various problems facing the industry from time to time, the Government (Department of Heavy Engineering) have set up a panel, on which the Ministry of Railways is also represented. This panel has already met and set up working groups to study important items like the economic size of production, steps to ensure quality, estimation of requirements by sizes and types, requirements of machinery, raw material etc. The development of indigenous capacity for roller-bearings for Railway rolling stock will be one of the items to be studied by the panel.

5. The Government is thus already seized of the necessity of developing indigenous capacity for the manufacture of roller-bearings required for rolling stock in a concerted way, as also for maintaining quality in production.

[*Ministry of Railways (Railway Board) O.M. No. 64-B (C)-E.C./44, dated 18th July 1964*].

Recommendation (Serial No. 26) Para No. 38

The Committee are glad to note that measures have already been initiated to manufacture cast steel front bogie for WP locomotives in Chittaranjan Steel Foundry. They hope that it would be manufactured indigenously, as early as possible, so as to save a substantial amount of foreign exchange which is being spent at present on its import.

REPLY OF GOVERNMENT

The Chittaranjan Steel Foundry expect to be able to commence manufacture of the front bogie for WP locomotives by 1965.

[*Ministry of Railways (Railway Board) O.M. No. 64-B (C)-E.C./44, dated 18th July, 1964*].

Recommendation (Serial No. 27) Para No. 39

The Committee would stress that remedial measures should be taken to ensure that stores are not accumulated in excess of the estimated requirements.

REPLY OF GOVERNMENT

Suitable instructions to the Railways and Production Units already exist to ensure that stores are not accumulated in excess of the estimated requirements. However, the recommendations of the Committee have been noted and brought to the notice of the Railway Administrations to avoid cases of this nature.

[*Ministry of Railways (Railway Board) O.M. No. 64-B(C)-E.C./44, dated 29th/31st August,* 1964].

Recommendation (Serial No. 28) Para No. 40

The Committee are glad to note that the percentage of investment on workshop would increase from 54.1% to 64.4% on completion of the Steel Foundry and Electric Loco Projects and that there would be corresponding reduction on township which would come down from 45.9% to 35.6%. The township share of cost entering in a locomotive in Chittaranjan Locomotive Works is stated to be Rs. 25,000. The Committee feel that in order to reduce the total capital investment and to ensure that it does not unduly add to the cost of production, Government may consider the advisability of developing the surrounding villages of new projects for the housing of industrial workers. Not only will this have the merit of reducing capital investment but will also help to provide the much needed leaven for effecting social and economic progress in the villages.

REPLY OF GOVERNMENT

The recommendation will be kept in view while planning future schemes on the Railways.

This recommendation has also been circulated to the Ministries of Steel, Mines and Heavy Engineering; Finance; Industry; Petroleum and Chemicals; Defence and Community Development and Co-operation for taking appropriate action on their side.

[*Ministry of Railways (Railway Board) O.M. No. 64-B(C)-E.C./44, dated 18th July,* 1964.]

Recommendation (Serial No. 29) Para No. 42

The Committee find that with the introduction of the incentive system of wage payment since 1954-55 in the Chittaranjan Locomotive Works, the annual locomotive outturn has been stepped up from 98 to 183 i.e., 86.5% and the boilers manufactured have gone up from 70 to 186 i.e., 166 p.c. with the increase in the strength of staff

of about two-thirds only. The Committee are glad that the incentive system of wage payment has proved a demonstrable success in Chittaranjan. They hope that the system would be extended not only to other large railway workshops but also to sheds, carriage and wagon establishments and in fact, to all operations which admit of such extension so that the productivity on the Railways, as a whole, is increased.

REPLY OF GOVERNMENT

Incentive schemes on the Chittaranjan pattern have been introduced in 28 major Mechanical Workshops (*i.e.* all workshops employing over 500 men) of the Indian Railways. The improvement in productivity achieved year by year is as under:—

Year	Percentage increase in Productivity
1957-58	—
1958-59	5.0
1959-60	12.4
1960-61	15.0
1961-62	18.0
1962-63	25.0
1963-64	41.7

The overall coverage under the incentive scheme is 85.3% upto 31st March, 1964. Further improvement in productivity is expected, when more men are brought under the incentive scheme and those under the scheme gain more experience.

2. Similar action has also been taken recently in respect of 5 Civil Engineering Workshops and 4 Signal Workshops, each employing over 500 men. Since the introduction of incentive scheme in the workshops has been taken up only recently the progress is not yet very substantial.

3. Next on the programme are the smaller workshops (*i.e.*, employing less than 500 men) which were initially left out.

4. The feasibility of applying incentive schemes to Carriage & Wagon Depots and Loco Sheds is also being investigated.

[*Ministry of Railways (Railway Board) O.M. No. 64-B(C)-E.C./44, dated 18th July,* 1964].

Recommendation (Serial No. 30) Para No. 43

The Committee suggest that the present system of suggestions in the Chittaranjan Locomotive Works may be reviewed in the light of

experience and the latest practices followed in this behalf in advanced countries, so as to adopt the most effective means of publicity and reward to stimulate workers' constructive suggestions to improve efficiency and reduce cost of manufacture.

REPLY OF GOVERNMENT

The recommendations have been noted. The Ministry of Railways (Railway Board) have been encouraging all categories of staff to offer constructive suggestions to improve efficiency and reduce the cost of manufacture. At present rewards in one or other of the following forms are made or suggestions that are accepted:—

(1) Special entry in the Service Sheet of the employee;
(2) Cash Awards;
(3) Grant of advance increments;
(4) Preference in grant of study leave;
(5) Extra sets of passes;
(6) Scholarships for children.

More recently the following two types of rewards have also been introduced:—

(1) Workmen working under incentive conditions are given a reward equivalent to the savings over a six month period for suggestions resulting in quicker production.

(2) Free or subsidised Educational tours.

2. Wide publicity is given through weekly gazettes and news bulletins not only to these systems of awards in regional languages, Hindi and in English, but also to the recipients and their suggestions.

3. These awards are already showing good results as on an average about 100 suggestions are received every quarter of which 10 to 15 are found acceptable.

4. As regards the recommendation to review the system of suggestions in the light of experience in advanced countries, the Committee have been informed that the Railway Ministry is already in touch with foreign railways through the Railway Adviser to the Indian High Commissioner in U.K. and efforts will be made to modify our suggestion schemes in the light of the latest practices followed in advanced countries.

[*Ministry of Railways (Railway Board) O.M. No. 64-B(C)-E.C./44, dated 29th/31st August,* 1964].

Recommendation (Serial No. 31) Para No. 45

The Committee are glad to note that in the Chittaranjan Locomotive Works, there is a provision for evening classes for the staff

who desire to qualify themselves technically in their spare time after working hours. The Committee commend this experiment and suggest that it may be introduced in other large workshops which have sizeable concentration of employees who show enthusiasm to better their technical skill.

REPLY OF GOVERNMENT

Instructions have been reiterated to Railway Administrations for setting up more Training Centres and making the existing centres more effective, so that staff, in their spare time, after working hours, could get themselves technically qualified in workshops where a sizeable proportion of employees are provided with quarters or are living in nearby colonies. General Managers have also been asked to take personal interest in the running of such centres.

[*Ministry of Railways (Railway Board) O.M. No. 64-B (C)-E.C./44, dated 29th/31st August,* 1964].

Recommendation (Serial No. 32) Para No. 46

The Committee would commend the financing of schemes like awarding of scholarships for technical education for employees' children from the Staff Benefit Fund or equivalent fund of large national undertakings.

REPLY OF GOVERNMENT

The Ministry of Finance (Department of Expenditure) have been requested to take necessary action on recommendation No. 32 which concerns Civil Ministries.

[*Ministry of Railways (Railway Board) O.M. No. 64-B (C)-E.C./44, dated 18th July,* 1964].

Recommendation (Serial No. 33) Para No. 47

The Committee are glad to note that there is close liaison between the Ministry of Railways and the Ministry of Defence about the production of defence equipment as necessary in the Railway Workshops like Chittaranjan Locomotive Works. As the Railways have got large workshops and expert knowledge in the field, the Committee have no doubt that every assistance would be rendered by them in undertaking manufacture of defence requirements particularly during the period of emergency.

REPLY OF GOVERNMENT

The Ministry of Railways would like to assure the Committee that all possible assistance is being rendered and will continue to be rendered by the manufacture of Defence requirements in Railway Workshops.

[*Ministry of Railways (Railway Board) O.M. No.* 64-*B*(*C*)-*E.C.*/44, *dated* 18*th July*, 1964].

CHAPTER III

RECOMMENDATIONS WHICH THE COMMITTEE DO NOT WANT TO PURSUE IN VIEW OF THE GOVERNMENT'S REPLY

Recommendation (Serial No. 17) Para No. 27

The Committee are informed that in March, 1961 *the Government decided to increase the capacity of the Steel Foundry from* 7000 *tons to* 10,000 *tons per annum. The collaboration terms to cover the enlarged scope of the Steel Foundry Project were settled with M/s. F. H. Lloyd, the collaborators for Steel Foundry of* 7,000 *tons capacity by negotiation. The details of the Supplemental Agreement are understood to have been finalised by correspondence and the formal agreement has been signed in November,* 1963.

As already noted in para 25 *of the Report, there was an initial delay of three years in finalising the Agreement with M/s. F. H. Lloyd & Co. Ltd., to start the Steel Foundry. If this period had been put to effective use the Steel Foundry of* 7,000 *tons capacity would already have been completed by* 1961 *and then it should have been possible for the Railways to raise on their own the capacity to* 10,000 *tons.*

The Committee, therefore, feel that an additional supplemental payment of £45,000 *(Rs.* 6 *lakhs) to the collaborators for increasing the capacity to* 10,000 *tons was not altogether unavoidable.*

Reply of Government

In the reply to recommendation No. 16 of the 44th Report of the Estimates Committee (Third Lok Sabha), it has been fully explained why it took some time to make the choice of a suitable Collaborator and to finalise the agreement for setting up of a Steel Foundry at Chittaranjan. The remarks against recommendation No. 17 are, therefore, confined to answering the specific point about the occasion for entering into a supplemental agreement for increasing the capacity from 7,000 tons to 10,000 tons per annum.

2. The Ministry of Railways would like to submit that the expansion of the capacity from 7,000 tons to 10,000 tons was not so much a question of a mere quantitative increase as of the enlargement of the range of items as a result of a decision to diversify production. The types of castings contemplated for manufacture in the Foundry in the initial stage of 7,000 tons capacity were in the main steel castings for WG steam locomotives and allied castings and the drawings, layout etc. were to be such as would permit convenient expansion of production of these castings at a future date for the manufacture of 10,000 tons per annum. The decision to establish the Diesel Locomotive Works at Varanasi was an important development which was not in the picture when the 7,000 tons capacity was planned, and this naturally called for a reappraisal. Taking into account all the developments in respect of steel casting requirements of Railways including requirements of general castings for steam locomotives manufactured at Chittaranjan, which had stabilized at 14 WG/WP locomotives per month, a decision was taken to diversify production to develop capacity to 10,000 tons of castings per annum even in the initial instance. The additional capacity of 3,000 tons per annum was to cover new ranges of specialised castings, outside the range of general steel castings for steam locomotive production forming the 7000 tons as earlier envisaged, like COCO bogies for diesel locomotives, cast steel bogies for BOX types of wagons, central buffer couplers etc. Even the advanced and established manufacturers did not generally possess the know-how for the castings for the COCO bogies. The extra capacity of 3,000 tons per annum was thus not a mere quantitative increase. All the same Ministry of Railways did give thought to the possibility of restricting the collaboration with M/s. Lloyds in the first instance only to 7,000 tons, and later on, after this capacity had been established, to consider afresh the position about expansion to 10,000 tons, with a separate tie-up, if necessary, to cover the production of COCO bogies. The solution was, however, not considered desirable as it would have delayed getting on to the 10,000 tons capacity and the setting up of the production of COCO bogies castings, with consequential need for procurement by import of COCO bogie required for the production in the Diesel Locomotive Works for a considerable time. Thus, in all the circumstances of the case, the Ministry of Railways would submit that the experience that might have been gained in setting up the 7,000 tons capacity steel foundry would not have resulted in the avoidance of payment of the additional supplemental fee to the collaborators.

[*Ministry of Railways (Railway Board) O.M. No. 64-B(c)-E.C./44 dated 18th July, 1964.*]

Recommendation (Serial No. 18) Para No. 28

The Committee find that there is a steep and disapportionate increase in the estimated annual recurring expenditure on the steel foundry with 7,000 and 10,000 tons capacity. They also note that the estimated cost of production per ton is Rs. 1,715 in the 7,000 tons capacity foundry whereas in the 10,000 tons capacity it is estimated at Rs. 2,180. The Committee would like the Ministry of Railways to carefully review the reasons for this disproportionate increase and to see what economy can be achieved.

REPLY OF GOVERNMENT

The Ministry of Railways have carefully reviewed the cost of production in the 10,000 tons capacity foundry *vis-a-vis* the cost of production in the 7,000 tons capacity foundry and feel that the increase in the cost per ton in the 10,000 tons capacity foundry is not disproportionate.

Steel castings fall broadly, under the following categories:—

(1) Light and simple;

(2) Light and intricate;

(3) Medium and simple;

(4) Medium and intricate;

(5) Heavy and simple; and

(6) Heavy and intricate.

In the initial project of a 7,000 tons foundry, production was to be mainly of the first five categories and only about 20 per cent of the capacity was to be utilised for the heavy and intricate castings. In the 10,000 tons capacity foundry, while the quantum of castings in the first five categories will remain the same as in the 7,000 tons capacity foundry, the additional 3,000 tons will all be of the heavy and intricate type, and the percentage of heavy and intricate castings will rise from about 20 per cent in the 7,000 tons capacity to about 45 per cent in the 10,000 tons capacity. Following data of the prices of castings obtained indigenously from various foundries coming

under the category "heavy and simple" and "heavy and intricate" will be of interest.

	Weight	Purchase price	Cost per ton
Heavy and simple	lbs.	Rs.	Rs.
1. Coupled wheel centres	1722	1800	2342
2. Carrying wheel centres	908	710	1752
3. Tender rubbing block	672	392	1306
	Average per ton		1800
Heavy and Intricate			
1. Front drag castings	3850	5000	2909
2. Tender drag castings	2184	2079	2132
3. WP Front truck bogie	3330	8000	5378
4. Hind drag castings	2800	3400	2719
	Average per ton		3284.50

It will be clear from the above figures that the increase in the average cost of production *per ton* in the larger foundry is due to the characteristics of the new product-mix.

[*Ministry of Railways (Railway Board) O.M. No.* 64-B(C)-*EC/* 45, *dated* 18*th July,* 1964].

FURTHER INFORMATION CALLED FOR BY THE COMMITEE

Please state the cost of 10,000 *tons capacity foundry in respect of the following categories:—*

1. *Light and simple;*
2. *Light and intricate;*
3. *Medium and simple;*
4. *Medium and intricate;*
5. *Heavy and simple;*
6. *Heavy and intricate.*

Has the cost since gone up, gone down or remained the same?

[*Lok Sabha Secretariat's O.M. No.* 5|19|(2)|*EC.II*|63, *dated* 3-8-1966].

FURTHER REPLY OF THE GOVERNMENT

The cost of production of castings for each of the various categories mentioned above is not available separately, but arrangements are being made for collecting the cost in respect of each of the above categories in future.

The average cost of production during 1965-66 for the outturn of 5797 tons with heavy and intricate castings constituting 30% of the outturn, was Rs. 2232 per ton excluding the element of "interest charges on capital cost" and Rs. 2484 per ton including "proportionate interest charges on the capital cost". On the basis of the estimated average cost of Rs. 1505 (excluding Rs. 210 for interest charges) per ton for 7,000 ton capacity with 20% heavy and intricate castings and Rs. 1928 (excluding Rs. 252 for interest charges) per ton for 10,000 ton capacity with for 45% heavy and intricate castings, the estimated cost for the actual outturn of 5797 tons with 30% heavy and intricate castings during 1965-66 should be Rs. 1675 (excluding interest charges) per ton. With the addition of Rs. 252 per ton for interest charges, the estimated cost of production during 1965-66 should be Rs. 1927 (Rs. 1675 + 252) per ton. There is, thus an increase of Rs. 557 per ton (Rs. 2484 minus Rs. 1927) in the actual cost of production during 1965-66 out of which an increase of Rs. 410 per ton is due to increase in the cost of raw materials and wages etc. and the balance of increase of Rs. 147 per ton is due to the Foundry being still in its developmental stage and the production having not reached the optimum level. The average cost of steel castings in the market during 1965-66 was Rs. 2564 per ton as against the actual cost of Rs. 2484 per ton in C.L.W. Steel Foundry.

[*Ministry of Railways* (*Railway Board's*) *O.M. No.* 64-*B* (*C*)-*E.C./III/*44 *dated* 12*th August*, 1966].

CHAPTER IV

RECOMMENDATION IN RESPECT OF WHICH REPLY OF GOVERNMENT HAS NOT BEEN ACCEPTED BY THE COMMITTEE

Recommendation (Serial No. 16) Para No. 25

The Estimates Committee while taking note of the Steel foundry project, in their Thirty-second Report (May, 1956) had observed: "The Committee hope that the proposal will be finalised without undue delay". The Committee, however, find that the agreement with the collaborators was signed after nearly three years in January 1960 only. Considering the patent need for setting up the foundry, the Committee feel that the collaboration arrangement should have been finalised with greater sense of urgency.

REPLY OF GOVERNMENT

The Steel Foundry being set up at Chittaranjan, besides being the first one on the Railways, is also the only foundry in India with such a large capacity. The types and range of castings included in the production programme are specialised items of heavy and intricate nature, some of which have not been manufactured indigenously. Against this background, it was essential to choose a technical collaborator of repute, who would have the knowledge, experience, capacity and resources necessary to establish such a Steel Foundry.

Global tenders were invited in March, 1957 for technical collaboration. A preliminary examination of the various offers received was made to narrow-down the field of choice to those whose offers were, *prima-facie* reasonable in price and satisfactory in other aspects. Further detailed enquiries, including inspection of these firms abroad by Railway's Inspecting Officers, indicated that none of these tenderers had adequate knowledge and experience of modern steel foundry practices. While these enquiries were in progress, a revised offer from M/s. Komatsu Manufacturing Company of Japan and altogether fresh offer from M/s. F. H. Lloyd and Co., U.K., were received. These offers had then to be considered in detail and negotiations were undertaken to obtain a substantial reduction in the collaboration fee quoted by them in the first instance.

The Railway Board were fully alive throughout to the need for finalising the collaboration as quickly as possible, but, for the reasons mentioned above, the choice of a suitable collaborator and the terms of the agreement could not be finalised earlier.

[*Ministry of Railways (Railway Board) O.M. No. 64-B(c)-E.S./44 dated 18th July,* 1964.]

COMMENTS OF THE COMMITTEE

The Committee are not convinced with the reasons advanced by the Ministry of Railways for taking nearly three years in finalising the collaboration agreement for the steel foundry.

The Committee would, however, stress that in future collaboration agreements should be finalised with greater sense of urgency.

NEW DELHI;
9th November, 1966.
18th Kartika, 1888 (*Saka*).

ARJUN CHANDRA GUHA,
Chairman,
Estimates Committee.